

# **REQUEST FOR PROPOSAL**

**08/21/2013**

## **MASTER (ON-CALL) CONTRACT FOR UNDERWATER BRIDGE INSPECTION**

Statewide

**Issuing Office  
Mississippi Department of Transportation  
P. O. Box 1850  
Jackson, Mississippi 39215-1850**

## **Table of Contents**

<b>PART 1: GENERAL INFORMATION FOR CONSULTANT(s) .....</b>	<b>3</b>
<b>PART 2: INFORMATION REQUIRED/SELECTION CRITERIA .....</b>	<b>10</b>
<b>PART 3: PROJECT DESCRIPTION .....</b>	<b>14</b>

**PART 1:**  
**GENERAL INFORMATION FOR CONSULTANT(s)**

**I. Purpose**

This Request for PROPOSAL (RFP) is intended to provide interested underwater inspection CONSULTANT(s) with sufficient information for the preparation and submission of a proposal for consideration by the Mississippi Transportation Commission (hereinafter referred to as the **COMMISSION**). The services requested consist of the following:

Firms will be requested to provide inspections on bridge elements which may be partially or completely submerged. The inspections will include pictures and a report with complete documentation of the inspection. The firm may also be required to develop underwater bridge inspection procedures for each bridge. These bridges are located throughout the state and include saltwater crossings as well as freshwater crossings. For selected bridges, portions of the bridges' substructures and the channel bottom surrounding the substructures will be displayed and recorded with acoustic imaging using high-resolution scanning sonar. In addition, heavy drift removal requiring the use of a heavy duty winch truck may be required at a number of sites.

**II. Issuing Office**

This RFP is issued by the Mississippi Department of Transportation (MDOT) on behalf of the **COMMISSION**. CONSULTANT(s) submitting PROPOSALS must comply with the instructions in this RFP, Legal Ad, and any addenda. The issuing office is identified below:

Scot Ehr Gott, P.E.  
Mississippi Department of Transportation  
P.O. Box 1850  
Jackson, Mississippi 39215-1850  
Or e-mail at Scot Ehr Gott, P.E.  
[sehrgott@mdot.ms.gov](mailto:sehrgott@mdot.ms.gov)

**III. Intent of the COMMISSION**

The intent of the **COMMISSION** is to award an on-call Master Contract to a CONSULTANT(s) to provide the services specified herein. This document does not and is not intended to include or address every item that will be included or addressed in the contract for professional services.

**IV. The Selection Process**

Selection of CONSULTANT(s) will be based on the criteria established in the RFP and/or any addenda. CONSULTANT(s) **shall not** submit any cost or price information with their proposals. CONSULTANT(s) for this RFP should submit complete PROPOSALS sufficient for final selection of the most qualified firm(s). The MDOT will then select the most qualified firm(s) based on the criteria. The

**COMMISSION** reserves the right to select the CONSULTANT(s) for award of a Master Contract using one of the following methods:

- A. Final ranking of all proposals based on the initial response to this RFP, or
- B. Selection of a Short List of at least two and not more than five qualified CONSULTANT(s), if available. Firms on the Short List will then be asked to make presentations to the appropriate MDOT staff. The Short-listed CONSULTANTS will be notified by a written letter. The letter will also indicate all pertinent information necessary to prepare for the presentation. If this Short-list method is used, final ranking will be made after the Selection Committee evaluates the Short-listed firms.

Once the most qualified firm(s) are selected and awarded an on-call Master Contract, the MDOT will provide the on-call Master Contract for the selected CONSULTANT(s) to execute based on the description of work established in this RFP and/or any addenda. If the selected CONSULTANT(s) do not execute the contract or are unable to meet any contractual requirements within 15 days of receipt, then MDOT may select the next most qualified firm on the selection list until an on-call Master Contract has been executed.

Selected CONSULTANT(s) may then be assigned Work Assignments throughout the Master Contract term. Work Assignments will be assigned based on MDOT's standard operating procedures.

## **V. Type of Contract**

The terms of a Master Contract for a selected CONSULTANT will not exceed three and a half (3½) years with an estimated maximum contract amount of up to three (3) million dollars; however, MDOT may elect to execute a contract for a lesser "not to exceed" amount. The on-call Master Contract will utilize **cost plus fixed fee, labor hour/unit cost or lump sum/firm fixed price Work Assignments to include a maximum "not to exceed" amount**<sup>1</sup>. The on-call Master Contracts and associated Work Assignments will include all appropriate federal contract provisions in accordance with 49 CFR, Part 18, as revised. The on-call Master Contract and associated Work Assignments will provide general terms and conditions for performance of services, as well as specific instructions for fees, billing, payment, etc.

The execution of a Master Contract is no assurance that any Work Assignment will be assigned to the CONSULTANT or that the parties will enter into Work Assignment(s). If a Work Assignment is assigned to the CONSULTANT, cost will be negotiated at a fair and reasonable price. Direct expenses may be reimbursable but will count towards the "not to exceed" amount negotiated as part of the contract.

---

<sup>1</sup> All Architectural and Engineering (A/E) – including surveying Consultant and subconsultant firms shall comply with the AASHTO Uniform Audit & Accounting Guide – 2012 (as revised). This guide may be found at <http://audit.transportation.org/pages/default.aspx/>

An example of a typical MDOT professional service contract template may be found on the website at the web link indicated below. The template will be identified as “Engineering Services Master Contract Template.”

<http://sp.gomdot.com/Consulting%20Services/Pages/Templates.aspx>

The **COMMISSION** intends to utilize this template in order to execute a contract with the selected CONSULTANT(s).

**NOTE: This RFP does not and is not intended to include or address every item that will be included or addressed in the contract for professional services.**

#### **VI. Rejection of PROPOSALS and/or Discontinuance of Contract Execution**

The **COMMISSION** reserves the right to reject any and all PROPOSALS and/or to discontinue the execution or negotiations of an on-call Master Contract or Work Assignment with any party at any time prior to final Master Contract or Work Assignment execution.

#### **VII. Costs Incurred by CONSULTANT Prior to Execution of a Contract**

The **COMMISSION** shall not be liable for any costs incurred by any CONSULTANT prior to the execution of an on-call Master Contract or Work Assignment by all parties. Furthermore, the **COMMISSION** shall not be liable for any costs incurred by the CONSULTANT under any Work Assignment prior to the effective date of the Project Director’s Notice to Proceed for that Work Assignment.

#### **VIII. Addenda to and/or Questions about the RFP**

Only written requests by e-mail to the below addressees will be considered.

Scot Ehrgott  
[sehgott@mdot.ms.gov](mailto:sehgott@mdot.ms.gov)  
and copy (Cc)  
Stephen Rone  
[srone@mdot.ms.gov](mailto:srone@mdot.ms.gov)

No requests for additional information or clarification to any other MDOT office, CONSULTANT, or employee will be considered. All responses to written questions and addenda will be in writing and will be posted to the MDOT website indicated below:

<http://mdot.ms.gov/portal/LegalAd.aspx>

CONSULTANTS shall be solely responsible for checking the website for updates. The MDOT will not be responsible for any oral exchange or any exchange of information that occurs outside the official process specified herein.

All written questions shall be e-mailed to the above addressees no later than **September 4<sup>th</sup>, 2013, 5:00 p.m., Central Time.**

MDOT intends to post written answers for this RFP to the website indicated above no later than **September 9<sup>th</sup>, 2013.**

#### **X. CONSULTANT Submission**

To be considered, **six (6) copies and one (1) CD containing electronic PDF file(s)** of the CONSULTANT's PROPOSAL must be received by **5:00 p.m., Central Time, Wednesday, September 25<sup>th</sup>, 2013**, at the office of the MDOT Consultant Services Unit, addressed to Scot Ehrgott, 10th floor, Mississippi Department of Transportation Building, 401 North West Street, Jackson, Mississippi, 39201.

Proposals received after **5:00 p.m., Central Time, Wednesday, September 25<sup>th</sup>, 2013**, may be deemed non-responsive.

#### **XI. PROPOSALS**

To be considered, CONSULTANT(s) must submit a complete response to this RFP and any addenda, addressing those requirements provided in Part 2 of this RFP. No other distribution of PROPOSALS should be made by the CONSULTANT. The original and all required copies of the PROPOSAL should be signed by an official authorized to bind the CONSULTANT to its provisions.

#### **XII. Economy of Preparation**

PROPOSALS should be prepared simply and economically, providing a straightforward, concise description of the CONSULTANT'S ability to meet the requirements of the RFP and any addenda.

#### **XIII. Prime Consultant Responsibilities**

The selected CONSULTANT will be required to assume responsibility for all services offered in the PROPOSAL whether or not they are produced directly by the CONSULTANT or through subconsultant(s). Furthermore, the **COMMISSION** will consider the CONSULTANT selected to be the sole point of contact with regard to contractual matters, and the MDOT retains the right to approve or disapprove all proposed subconsultant(s). CONSULTANT(s) responding to this RFP must identify all proposed partners and subconsultant(s).

Under no condition will the selected CONSULTANT be allowed to sublet or subcontract more than 60% of the work required under the contract. It is clearly understood and agreed that specific projects or phases of the work may be sublet or subcontracted in their entirety provided that the selected CONSULTANT performs at least 40% of the overall contract with its own forces.

The selected CONSULTANT must be registered with the Mississippi Secretary of State's Office to do business in the State of Mississippi prior to contract execution. Failure to comply with this requirement within 30 days of selection notification may result in failure to execute a contract with the selected

CONSULTANT. MDOT may then reject the selected CONSULTANT for the duration of this process and negotiate an on-call Master Contract with the next most qualified CONSULTANT on the list until the contract has been executed. Additional requirements may apply as identified in Part 2 of this RFP.

#### **XIV. Disclosure of PROPOSAL Contents**

All materials submitted in response to this *RFP* shall become the property of the **COMMISSION** and may be returned only at the **COMMISSION**'s option. All information submitted in response to this RFP shall be subject to disclosure under the Mississippi Public Records Act and any other applicable law.

#### **XV. Nondiscrimination Requirement**

By submitting a response to this RFP, the CONSULTANT agrees that they understand that the **COMMISSION** is an equal opportunity employer. It is the policy of the **COMMISSION** to comply with all applicable portions of Title VI of the Civil Rights Act of 1964 which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, or disability. The proposed contract will require that the CONSULTANT and all subconsultant(s) agree to strictly adhere to this policy in all employment practices and provision of services.

In the event the CONSULTANT performs work for the **COMMISSION** that involves the selection of a site or location of a facility, the CONSULTANT shall utilize criteria or methods of selection which consider the impacts and benefits of the facility on persons without discrimination because of their race, color, religion, sex or national origin. The criteria and methods shall be designed to include proactive measures for obtaining citizen participation from persons of all applicable races, colors, religions, sexes and national origins.

#### **XVI. Disadvantaged Business Enterprise (DBE) Goal**

The MDOT is committed to provide for full participation by Disadvantaged Business Enterprises (DBEs) in contracting opportunities available through this Master Contract, to the greatest extent practical. DBE goals may be applied to Work Assignments at MDOT's discretion. In the event that a DBE goal is required on an individual Work Assignment, MDOT approval of the DBE subconsultant(s) will be required.

CONSULTANT(s) may visit MDOT's website, [www.gomdot.com](http://www.gomdot.com), to view a complete list of Certified DBE Firms which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UCPs). The DBE firm must be on the Department's list of "Certified DBE firms" as listed on MDOT's website, [www.gomdot.com](http://www.gomdot.com), and approved by MDOT to perform the classification of work to count towards meeting the DBE goal.

#### **XVII. Notification of Selected CONSULTANT(s)**

The selected CONSULTANT(s) for both the Short List (if necessary) and the final selection will be notified of their status by the MDOT. The CONSULTANT(s) whose PROPOSALS are not selected will be notified in writing of the name of the selected CONSULTANT(s).

## **XVIII. Debriefing Request(s)**

If a CONSULTANT opts to request a debriefing following the announcement of the selected CONSULTANT(s), the CONSULTANT shall send an e-mail to the below addressees within two (2) weeks of the distribution of the notification letter of the selected CONSULTANT(s). Any debriefings shall be limited to the merits of the individual CONSULTANT's PROPOSAL.

Scot Ehr Gott, P.E.  
[sehgott@mdot.ms.gov](mailto:sehgott@mdot.ms.gov)  
and copy (Cc)  
Stephen Rone  
[srone@mdot.ms.gov](mailto:srone@mdot.ms.gov)

## **XIX. Contract Administration**

The CONSULTANT contract will be administered by the MDOT. All payments will be made to the contracted prime CONSULTANT(s) by the MDOT. The prime CONSULTANT will be responsible for all payments to its partners and/or subconsultant(s).

## **XX. Key Personnel Modifications**

Key Individuals and team members are to remain for the duration of the contract and changes cannot be made without prior MDOT approval. Modifications of Key Individuals are discouraged. MDOT will not approve requests for modification without justification. Examples of justification include death of a team member, changes in employment status, bankruptcy, inability to perform, organizational conflict of interest, or other such significant cause. In order to secure MDOT's approval prior to execution of the contract, the CONSULTANT shall e-mail the below addressees:

Scot Ehr Gott, P.E.  
[sehgott@mdot.ms.gov](mailto:sehgott@mdot.ms.gov)  
and copy (Cc)  
Stephen Rone  
[srone@mdot.ms.gov](mailto:srone@mdot.ms.gov)

The request shall include:

- A. The nature of the desired change,
- B. The reason for the desired change, and
- C. A statement of how the desired change will meet the required qualification for the position/responsibility.



## **XXI. Procurement Schedule**

The following schedule identified below lists the projected dates for the procurement of this on-call Master Contract.

<b><u>Procurement Schedule</u></b>	
Advertisement dates for legal notice	August 21 <sup>st</sup> , 2013 & August 28 <sup>th</sup> , 2013
Deadline for CONSULTANTS' written questions	September 4 <sup>th</sup> , 2013, 5:00 p.m.
*Answering of written questions	*September 9 <sup>th</sup> , 2013
Deadline for delivery of PROPOSALS	September 25 <sup>th</sup> , 2013, 5:00 p.m.
*Selection of qualified CONSULTANT(s)	*November 2013

### **\*Approximate dates only.**

Note: All times are Central Time.

## **PART 2: INFORMATION REQUIRED/SELECTION CRITERIA**

### **I. Format for PROPOSAL**

To be considered, the PROPOSAL must respond to all requirements of this RFP, the Legal Ad, and any addenda. The recommended PROPOSAL length should not exceed twenty-five (25) pages, exclusive of appendices. All resumes, certifications/licenses, SF-330 – Part II, and other information not relevant to these requirements should be included in the appendices. The following information should be included in the recommended 25-page maximum: the CONSULTANT's cover letter, table of contents, organizational chart, summaries and introductions, and responses to the evaluation criteria indicated in Part 2, Section III of this RFP. Pages should be numbered, single-spaced, one-sided, 8.5 by 11 inches with margins of at least one inch on all four sides. No more than five pages may be 11 by 17 inches, but they may count as two sheets each against the recommended 25-page maximum. Information within the recommended 25-page limit of the PROPOSAL must be complete and sufficient in scope for the selection committee to evaluate the CONSULTANT. Also, all text information in the 25-page limit should be shown in a readable font, size 12 points or larger. Headers, charts, and other graphics may be provided in a different font type and size providing they are legible. Section dividers, tabs, or similar means are recommended but are not counted as part of the recommended 25-page maximum.

These recommendations and other instructions indicated in this RFP will be considered when evaluating the quality of the CONSULTANT's PROPOSAL.

CONSULTANT(s) are encouraged to thoroughly address the requirements of the RFP for the highest quality response. Those PROPOSAL(s) which exceed the recommended PROPOSAL length or fail to provide any of the information in the appropriate location indicated below may adversely affect the CONSULTANT's score.

### **II. Requirements of the PROPOSAL**

CONSULTANT(s) interested in providing these services may indicate so by furnishing MDOT with **six (6) copies and one (1) CD containing electronic PDF file(s)** of a PROPOSAL as referenced in Part 1, Section X of this RFP. The CONSULTANT should divide its PROPOSAL into the following sections as listed below, clearly separated by tabs, section dividers, or similar means (however, resumes, certifications/licenses, SF-330 – Part II, and other information not relevant to these requirements should be included in the appendices). MDOT reserves the right to obtain references and additional information from any source listed in the PROPOSAL and any other source deemed appropriate for any of the requirements/criteria listed in this RFP. The quality of the PROPOSAL will be considered when evaluating the CONSULTANT's PROPOSAL. The PROPOSAL should provide at a minimum the following information:

#### **A. Cover Letter**

The CONSULTANT should provide a cover letter introducing its PROPOSAL. At a minimum the cover letter should contain the name of the prime CONSULTANT and any of its

subconsultant(s) and the name of an individual who will be the single point of contact throughout the selection process. In addition, the CONSULTANT must note if they are submitting as part of a joint venture.

## **B. Past Experience**

The CONSULTANT(s) should provide in its PROPOSAL descriptions of similar type work for similar projects performed during the past five (5) years which qualify the CONSULTANT(s) (and any subconsultant) for this work. The project(s) listed shall describe work related to these services for previous projects performed by the CONSULTANT and/or their subconsultant(s) with MDOT and/or other clients. **Each related project description should include a brief scope of the project, a description of the amount of the CONSULTANT's contract for the work they provided for the project, the date the project was initiated, and the anticipated or scheduled completion date.** The firm should provide contact information for each of the projects. This information should include a project client contact name, contact title, contact phone number, and contact e-mail address. **In addition, the CONSULTANT should provide at least five (5) samples of National Bridge Inventory (NBI) underwater inspection reports for the above referenced past projects which qualify the CONSULTANT for this work.**

## **C. Organizational Chart and Resumes**

The CONSULTANT(s) should propose an appropriate quantity and quality of staff to ensure the successful completion of all work with limited MDOT support. The CONSULTANT should provide a team organizational chart that identifies all proposed personnel of the CONSULTANT and any subconsultant(s) for this contract. The team organizational chart should include each individual's name, job description (for this contract), and company of employment.

The CONSULTANT(s) should provide resumes for each principal member, the project manager, and employee(s) of the firm anticipated to be assigned to the contract as referenced in the organizational chart. The resumes shall include an experience record for each diver and engineer that may be involved in this work as well as a listing by classification of each employee (or prospective employee) who may be assigned to this work. Resumes for any other known personnel that would be assigned to this contract may also be included but are not required. Resumes must reflect qualifications and recent experience relevant to the project description indicated in this RFP.

**The proposal should include proof that the Project Manager is licensed as a Mississippi Professional Engineer or Mississippi Surveyor and that the firm has met state licensure and certification requirements<sup>2</sup>.** MDOT prefers that the CONSULTANT's Project Manager be on the permanent staff of the CONSULTANT. In addition to extensive underwater

---

<sup>2</sup> \* Firms are encouraged to contact the Mississippi Board of Licensure for Professional Engineers and Surveyors at (601) 359-6160 to ensure that individuals and firms are qualified to offer and provide services in the State of Mississippi. The Board's web address is [www.pepls.state.ms.us](http://www.pepls.state.ms.us).

investigation experience, a CONSULTANT must have qualified engineering personnel licensed as Mississippi Professional Engineers on its staff, capable of rendering sound judgments and evaluations regarding the structural integrity of underwater bridge elements. All divers who may perform inspections shall have attended and successfully completed a FHWA-approved comprehensive bridge inspection training course or other FHWA-approved underwater inspection training course as prescribed in the National Bridge Inspection Standards (NBIS), 23 CFR 650.309. **The firm shall provide copies of the certifications of training for the courses described above for each individual diver including any certifications from subconsultant(s).**

#### **D. Quality Control and Quality Assurance Plan**

The CONSULTANT(s) (and any subconsultant(s)) should provide a description of its Quality Control and Quality Assurance (QC/QA) Plan for underwater inspections and report preparations similar to the project description. The QC/QA plan should fulfill the requirements set forth in the NBIS.

#### **E. Part II of Standard Form (SF) 330, Architect-Engineer Qualifications**

Please complete the Part II of Standard Form (SF) 330, Architect-Engineer Qualifications, which can be found at the web address below:

<http://sp.mdot.ms.gov/Consulting%20Services/Pages/Forms.aspx>

This form should be provided for each CONSULTANT's (and subconsultant's) branch office anticipated to provide services.

### **III. CONSULTANT Selection Criteria**

All responsive proposals received from CONSULTANT(s) will be reviewed and evaluated by the Selection Committee based on the selection criteria listed below. The criteria are listed in order of their relative importance to the Selection Committee.

- A. CONSULTANT's (and any subconsultant's) past experience, performance, and qualifications on similar projects with MDOT and/or other clients,
- B. Experience, performance, and qualifications of the CONSULTANT's (and any subconsultant's) staff including the engineering and diving staff that will be assigned to this contract,
- C. Quality, clarity, and thoroughness of the sample inspection reports provided in this proposal,
- D. Quality, clarity, and thoroughness of the QC/QA Plan, and
- E. Quality of Proposal.

### **PART 3: PROJECT DESCRIPTION**

**NOTE: This document does not and is not intended to include or address every item that will be included or addressed in the contract for professional services.**

#### **SECTION I: THE INSPECTION**

The services to be provided by the **CONSULTANT** shall include, but are not limited to, the following:

#### **NBI INSPECTION SERVICES**

A Level I and Level II underwater inspection shall be performed as stated below in accordance with the guidelines set forth in the Federal Highway Administration's Bridge Inspector's Reference Manual (Report No. FHWA NHI 12-049, December 2012) hereinafter referred to as the BIRM.

The **CONSULTANT** will schedule the inspections in accordance with the specified underwater bridge inspection frequency for each bridge.

When a Level I inspection indicates the need, a Level II inspection shall be performed in accordance with section 13.3.4 of the BIRM. At a minimum, ten percent (10%) of each underwater element (critical areas of the element) shall receive a Level II inspection. If a pattern of deficiencies is encountered, the inspection should continue to determine the extent of the deficiencies, and if necessary, a Level III inspection shall be performed.

The inspection shall extend from the waterline to the mudline of all underwater substructure and foundation bridge elements as identified by the MDOT Director of Structures, the State Bridge Engineer. Elements requiring inspection may be steel, concrete, or timber abutments, piling, piers, or pier protection systems. Specific inspection requirements shall include, but are not limited to, the following:

- Identify the location of the underwater elements at each bridge site, provide a description of these underwater elements, and describe the procedures utilized for the underwater inspection.
- Identify and describe any cracks, scaling, spalling, or erosion of concrete piers, piling, or abutments and exposure or deterioration of reinforcing steel.
- Identify any corrosion or section loss of steel piling and/or condition of any pile protection (paint system and concrete encasements).
- Identify any scour patterns in the stream bed adjacent to the foundation elements.
- Identify and describe any decay or deterioration of timber piling or abutments caused by fungi, insects, or marine borers.

- Identify and include measurements of any voids beneath footings and abutments and describe the condition of the exposed piling.
- Identify and describe condition, location, and size of in place riprap at piers, piling, embankment slopes, and streambeds.
- Identify and describe any damage to any substructure elements that may have been caused by ship or barge collision or debris.
- Identify the location and denote condition of all operating submerged power cables at or above the mudline for any movable bridge span.

In addition to the above-mentioned requirements, soundings shall be taken to depict the stream bottom along the centerline of the bridge and to depict any evidence of scour around substructure elements both upstream and downstream.

The diver shall make as many dives as necessary to obtain the required information, reporting all conditions observed whether they be satisfactory or unsatisfactory. All structural conditions, including loss of section to damaged or deteriorated areas, shall be reported in full detail giving all dimensions of size, shape, and exact location. When determined to be necessary, timber piling shall be cored.

The **CONSULTANT** may employ any method of underwater inspection prescribed in BIRM. Regardless of the method used, the **CONSULTANT** shall assure that voice communication be maintained between the diver and an assistant capable of interpreting and recording conditions as they are being observed and reported by the diver.

Incidental drift removal to facilitate the underwater inspection is considered a part of the inspection services.

### **BRIDGE UNDERWATER INSPECTION PLAN**

For each bridge to be inspected, the **CONSULTANT** may be required to develop an underwater bridge inspection procedure. The procedure shall clearly identify the location of all underwater elements of the bridge, specify the frequency of inspection, describe any specific risk factors, and clearly detail inspection methods and equipment to be employed.

### **BRIDGE UNDERWATER INSPECTION REPORT**

For each bridge to be inspected, the **CONSULTANT** shall furnish the Bridge Engineer a Bridge Underwater Inspection Report covering the inspection findings. The report shall be signed by a registered Mississippi-licensed Professional Engineer and include the following:

- 1) Damage assessment and recommendations for repair of bridge deficiencies; recommendations for repair shall be assigned a rating code as follows:
  - 1 Extensive deterioration requiring bridge closure.
  - 2 High priority remedial countermeasures required imminent bridge failure.
  - 3 Countermeasures required as soon as possible, or countermeasures in place but not functioning.
  - 4 Countermeasures in place and functioning.

5 No repairs required.

- 2) Proportionally scaled drawings and photographs as necessary to accurately describe and locate all defects in underwater bridge elements and to identify presence of rip rap or debris.
- 3) An assigned NBIS substructure condition rating and scour assessment in accordance with FHWA's "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges."
- 4) Assign a condition state rating for underwater bridge members in accordance with AASHTO's Manual for Bridge Element Inspection, MDOT's supplemental core elements, and/or any other manual or guide deemed necessary by the MDOT.
- 5) Results of scour or other indications of distress that may be present.
- 6) Underwater photographs in digital format shall be made to illustrate extensive damage or extensive deterioration where visibility permits.
- 7) Any other items necessary to fulfill the requirements set forth in the NBIS and by the MDOT.

The **CONSULTANT** shall sign and seal a certification that will accompany each submittal stating that the underwater bridge inspections have been performed and the inspection reports prepared and checked in accordance with the National Bridge Inspection Standards (NBIS) and the MDOT's specifications.

Errors and omissions in the report(s) shall be corrected by the **CONSULTANT** without additional compensation, except errors that may have resulted from defective data furnished by the MDOT.

### **INSPECTION WITH HIGH-RESOLUTION SCANNING SONAR**

Sonar inspection shall be performed at bridge sites identified by the MDOT. For bridges requiring sonar inspection, portions of the bridges' substructures and the channel bottom surrounding the substructures will be displayed and recorded with acoustic imaging using high-resolution scanning sonar. Images will be provided in the inspection report for each selected bridge.

### **HEAVY DRIFT REMOVAL AND DISPOSAL**

Surface and submerged heavy drift that may impede the underwater bridge inspection or cause structure damage or significant scour shall be dislodged and released so as not to exacerbate conditions at the bridge site. The drift shall be disposed of in a manner as to avoid becoming a barrier downstream.

### **QUALITY CONTROL/QUALITY ASSURANCE**

The **CONSULTANT** shall institute Quality Control (QC) procedures to maintain the quality of underwater bridge inspections and reporting and Quality Assurance (QA) procedures to assure the adequacy of the Quality Control procedures. The **CONSULTANT** shall submit a QC/QA plan in writing to the MDOT Bridge Engineer for review and approval prior to performing underwater bridge inspection or reporting. The QC/QA plan should detail the procedures, evaluation criteria, and instructions for the **CONSULTANT** to assure conformance.



## **OTHER INSPECTION SERVICES**

Non-NBI inspection of bridge elements which may be partially or completely submerged may be required on an as-needed basis.

## **MAINTENANCE OF TRAFFIC**

When required, the **CONSULTANT** will provide maintenance of traffic.

## **SECTION II: CONSULTANT/DIVER QUALIFICATIONS**

The underwater inspection(s) shall be conducted by a certified diver(s) meeting the requirements of the National Bridge Inspection Standards (NBIS). All underwater inspections shall be conducted under the direct supervision of a NBIS-qualified Team Leader. Members of the dive team must meet the requirements of and follow the operations procedures prescribed in the Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1910, Subpart T-Commercial Diving Operations) and United States Coast Guard (USCG) regulations covering commercial diving operation in areas under USCG jurisdiction (46 CFR, Ch 1, Subchapter V, Part 197, Subpart B, Commercial Dive Operations). The **CONSULTANT** shall have a Mississippi-licensed Professional Engineer (Civil/Structural) on its staff who is directly responsible for the thoroughness of the inspections, the analysis of the inspection findings, and any subsequent recommendations of corrective actions to be taken.

## **SECTION III: GENERAL REQUIREMENTS**

With the exception of the items specifically listed to be furnished by the **MDOT**, the **CONSULTANT** shall, for the agreed fee, obtain all data and furnish all labor, materials, and equipment necessary for the completion work.

## **SECTION IV: INFORMATION, DATA, AND SERVICES FURNISHED BY THE MDOT**

The **MDOT** will furnish the following services and data to the **CONSULTANT**:

- (1) The **MDOT** will grant the **CONSULTANT** full access to retrieve/copy any bridge plans, documents, maintenance records, or previous underwater inspection records as needed for the inspections.
- (2) The **MDOT** will provide a representative at the site(s) to assess the underwater inspection and heavy drift removal operations.
- (3) The **MDOT** representative will identify the piers, bents, abutments, or other bridge elements to be inspected at each site.
- (4) The **MDOT** will provide the previous underwater inspection date for each bridge to be inspected.